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serious, since he virtually acknowledges, that it is as well fenced as possible against corruption and partiality. Against corruption, since the holding of every place in the system depends upon *constant* individual exertion, and since every district's endowment for any year depends upon the attention of the parochial committee that year. And against partiality, since the three churches are properly *balanced* and *united* in the grand object. I am much gratified by the approbation manifested by your Correspondent, signed G. and by the arguments adduced in affirmance of the necessity of a radical reform in the education of the people. This I have particular reason to expect, from a distinguished member of the House of Commons. SIMPLEX.

To the Proprietors of the Belfast Magazine.

ESSAY ON PRINTING.

GENTLEMEN,

AS the history and nature of *Stereotype* printing is not generally understood, I beg leave to trouble you with a few observations on that subject. I have borrowed my information from the best authorities; and with a view of rendering my short essay more complete, I have also given an abstract of whatever appeared to me most interesting on the subject of printing in general. Should you consider it adapted to the objects of your useful Miscellany, your insertion of it will oblige, A.Z.

It is probable that we are indebted for the valuable art of printing to the Chinese. At least it is certain, that it was practised in China, long before it was known in Europe. Some European traveller might have perceived the improvement, and introduced it into the Western world. It is singular that the Romans did not practise printing, as they appear to have been really in possession of the art. They used stereotypes for stamping their pottery; and it is really surprizing, that they should not have thought of extending the art to literary productions.

Three towns of Europe claim the honour of the invention of printing; Haerlem, Strasburg, and Mentz.

It is generally allowed, however, that Guttemberg was the inventor of the art of printing with moveable types, that he commenced at Strasburg and perfected the art at Mentz.—The names of the other candidates for this honour are, John Faust, of Mentz; John Mental, of Strasburg, and L. John Koster, of Haerlem.—When Mentz was taken by Adolphus, in 1462, the printers of that city were involved in the general loss and sufferings which their townsmen experienced; and dispersing with a view of bettering their fortunes, the art of printing was thus diffused over Europe.

When it was first established at Paris, a memorial was presented by the copiers of that city, praying the parliament to consider how materially their business was injured by the printers, and to grant them redress. That tribunal infected with the superstition of the times, conceived the printers to be conjurers, and had proceeded to seize and confiscate their property, had they not been prevented by Louis XI. who, notwithstanding his bad qualities, was the friend and patron of literature.

The art of printing was practised at Rome so early as the year 1467, and soon after in England, under the auspices of Bourchier, archbishop of Canterbury. That prelate sent out W. Turner, master of the robes, and W. Caxton, merchant, to the Continent, to learn the art. These ingenious gentlemen met with one Corseilles, an underworkman, whom they prevailed upon, by handsome presents, and large promises, to come over to England and instruct them in the art. Immediately a press was set up at Oxford, which was afterwards removed to St. Albans, and to Westminster Abbey. Another account states, that Caxton was sent in 1464, by Edward IV. to negociate a commercial treaty with the Duke of Burgundy, and that he learned the art of printing, during his residence on the Continent. It is certain, that though a merchant, he possessed a literary taste, and his first work was a translation from a French historical miscellany.

The tradition of the devil, and Dr. Faustus, originated from the peculiar

circumstances in which that printer was placed. Having acquired a knowledge of the art, he printed off a considerable number of copies of the bible, imitating as was customary in those times, those which were commonly in use in manuscript, and exposed them for sale in Paris. It was his interest to conceal the discovery, and to endeavour to pass off his copies for manuscripts. But the low price at which he was enabled to sell his bibles excited universal astonishment. While the Scribes demanded five hundred crowns for their copies, he demanded for his only sixty, and afterwards but thirty; while at the same time, he was able to furnish copies, as fast as they were wanted. These things, together with the great uniformity apparent in his bibles, could not fail to agitate the public mind, and subject the printer to the persecutions of an ignorant and superstitious magistracy. Accordingly, informations were lodged against him as a magician; his rooms were searched, and all the copies on hand seized. The red ink with which he embellished his copies was said to be his blood, and it was solemnly adjudged that he was in league with the devil. To save himself from the stake, Faust was obliged to discover his art to the parliament at Paris, who pardoned him, on account of the utility of the invention.

When the art of printing was yet in its infancy, they made use of only one side of a leaf. Specimens of these early printed books, are to be seen in his majesty's, and lord Spencer's libraries. In some instances they pasted the two blank pages together, which made the two leaves appear as one. The printers at first made use of blocks of soft wood, on which their letters were carved. But these being continually liable to break, moveable types, which has produced a most astonishing rapidity of execution, were soon invented.

In superior editions, they omitted to print the first letter of a chapter, for which they left a blank space, that it might be illuminated, at the pleasure of the purchaser. What was called *illuminating* was merely daubing the letters, with which they filled the blank spaces, with colours, that they might have a more showy and brilliant effect. These are very coarse and inelegant, but were much esteemed in early times.

Religious books of all kinds, were at an early period, printed in the most splendid style. Prayer-books, in particular, were embellished with cuts of superior elegance; though many of them exhibited figures, ludicrous, and even obscene. In one of them, an angel is represented as crowning the virgin Mary, and God himself assisting at the ceremony.—In others, St. Michael is seen overcoming Satan; and sometimes St. Anthony appears attacked by various devils of the most hideous forms.—Specimens these, of the superstitious mummery which distinguishes the annals of these early times.

Soon after the art of printing was discovered, learned men took a pride in being correctors of the press to eminent printers. Men in all the learned professions crowded to the press, and vied with one another in the correctness of the editions which they published. To recommend their books, the printers usually annexed the name of the corrector of the press, and editions were held in estimation, according to his supposed abilities.

Robert Stephens, one of the early printers, excelled in the correctness of his editions. It was his ambition to render his works immaculate; and with a view to this, it is said, that he hung up proofs for the inspection of the public, and offered rewards to those who should discover any typographical errors.

Plantius, though a man of letters, is yet more distinguished as a printer. His printing office is said to have been one of the wonders of Europe. The building was exceedingly magnificent and was the chief ornament of the city of Antwerp. Outwardly the eye was astonished at the splendour of the edifice; and within, not less, by the prodigious number of presses, characters of all figures and sizes, without number, matrixes to cast letters, and all other printing materials, beyond calculation; the value of the concern, Baillet assures us, was immense.

Many eminent printers have ap-

peared in more modern times; though, which is to be regretted, our publishers are rarely now as they were formerly, literary men. Robert and Andrew Foulis, of Glasgow, were indeed men of letters, and printers of high reputation. They were printers to the university; and their editions of the classics, and of some of our best English writers, are deservedly esteemed, for their elegance and correctness. Type-founding having now reached a most astonishing pitch of perfection, which with the excellence of the printing materials, the advantages of the finest wove paper, than which nothing can be conceived more beautiful, and of the hot press, the London printers appear to have arrived at the utmost perfection of the typographic art. Indeed they perhaps employ a style of elegance that is superfluous or even prejudicial; for in consequence of the style in which their editions are printed and embellished, they are swelled to a most evtravagant expense, and can be purchased only by public libraries, or gentlemen of fortune.

"One of the most egregious, shall we add illustrious of all literary blunders," says an anonymous writer, "is that of the edition of the Vulgate, by Pope Sixtus, V. His holiness carefully superintended every sheet, as it passed through the press; and to the amazement of the world, the work remained without a rival. It swarmed with errata! A multitude of scraps were printed to paste over the erroneous passages, in order to give the true text. The book makes a whimsical appearance, with these pasted corrections, and the heretics exulted in this demonstration of papal infallibility. The copies were called in, and violent attempts made to suppress it; however, a few remain for the rapturous gratification of the biblical collectors. At a late sale, the bible of Sixtus, V. fetched above sixty guineas; not too much for a mere book of blunders! The world was highly amused at the bull of the Pope and editor, prefixed to the first volume, which excommunicates all printers, &c. who in reprinting the work, should make any alteration in the text."

It is said of a printer's widow in Germany, that while a new edition of the Bible was printing at her office, she made a remarkable alteration in Genesis iii, 16, she substituted the word *Narr* for *Herr;* thus making the sentence, instead of, "and he shall be thy *Lord*," "and he shall be thy *Fool*." This indiscretion, it is said, cost her her life: though this bible was afterwards esteemed so valuable, that some secreted copies were bought up at enormous prices.

There was an edition of the bible printed at the Clarendon press, in 1717, known by the name of the *Vinegar Bible*, in consequence of a typographical error in Luke 10, where, in the title to the chapter, in place of the word vineyard, the word *vinegar*, was introduced.

Another edition of the bible was printed in England, in which, in the seventh commandment, the important word *not* was by mistake omitted.—In consequence of this blunder, the Archbishop of Canterbury, laid a heavier penalty on the company of Stationers, than was ever known in the annals of literary history.

In an article on printing, written for the Belfast Magazine, it is impossible to pass over without a remark, the state of printing in this part of the United Kingdom. In Dublin a becoming spirit of emulation has lately manifested itself, and several works lately printed in that city evidence considerable improvement in the art. But I conceive, that the taste and elegance of the town of Belfast is in this respect superior even to those of the metropolis. Robinson's Poems, Drummond's Battle of Trafalgar, and the Fasciculi of the Belfast Literary Society, want nothing but the hot press to recommend them to the attention of the most fastidious critic.

It remains for me to make some observations on *Stereotype* printing, a method lately adapted in England, and France; especially as it is not used, or generally known, in this part of the united kingdom.

Though lately introduced, stereotype printing appears to have been the most ancient method of printing known in the world. The method of stamping figures of various kinds on linen and paper, has been known

in the east, beyond the memory of man; so that it is not a little surprizing, that the stereotype should not have been much sooner introduced, for the printing of books in Europe.

The history of this admirable invention, is like that of common printing, involved in some obscurity. The following extract from Tilloch's Philosophical Magazine, seems to throw light on the subject.

"Above an hundred years ago, the Dutch were in possession of the art of printing with solid or fixed types, which in every respect, was superior to that of Didot's stereotype. It may, however, be readily comprehended, that their letters were not cut in so elegant a manner; especially when we reflect on the progress which typography has made since that period. Samuel & J. Leuchtmans, booksellers at Leyden, have still in their possession the forms of a quarto bible, which were constructed in this ingenious manner. Many thousand impressions were thrown off which are in every body's hands, and the letters are still good.

"The inventor of this useful art was J. Vander Mey, father of the well-known printer of that name. About the end of the sixteenth century, he resided at Leyden. With the assistance of Muller, the minister of the German congregation there, who carefully superintended the corrections, he prepared and cast the plates for the above-mentioned quarto bible. This bible he published also in folio, with large margins, ornamented with figures: the forms of which are still in the hands of Eleve, bookseller at Amsterdam; also an English new Testament, and Schoof's Syriac Dictionary, the forms of which were melted down; likewise a small Greek Testament, in 18mo.

"As far as is known, Vander Mey printed nothing else in this manner, and the art of preparing solid blocks was lost at his death, or at least, was not afterwards employed."

It appears from a curious and interesting pamphlet published by Nichols of London, in 1781, entitled Biographical Memoirs of William Ged, that that printer had made some progress in stereotype printing. Mr. Ged began to prosecute this art in 1725. After a variety of disappointments, occasioned chiefly by the want of spirit and honesty in his partners, he returned to Edinburgh, where a specimen of stereotype printing was in a short time published by subscription. An edition of Sallust was published in 1736. Not only a copy of this work, but even a plate of one of the pages is in possession of Mr. Tilloch, who has likewise a copy of another small work, from plates cast by the same artist. The book is Scongal's Life of God, in the Soul of Man, 12mo. purporting to have been printed at Newcastle, in 1742, from plates made by William Ged, goldsmith in Edinburgh.

About 1775, Mr. Tilloch, professes having made a discovery of stereotype, without having had any knowledge of Ged's invention. In the course of his labours he was assisted by Mr. Foulis, printer to the university of Glasgow. These gentlemen took out patents for England and Scotland, and several small works were stereotyped and printed under their direction. Mr. Tilloch, however, having removed from Glasgow to London, the proprietors did not farther avail themselves of their patents, and the business was entirely discontinued.

It is not a little singular, that the French should claim the merit of this invention, though it was not till several years after, that Didot, a celebrated French printer, applied the stereotype to logarithamic tables, and several of the Latin classics.

Some years after Mr. Tilloch had relinquished the prosecution of stereotype printing, Mr. Wilson, an eminent printer of London, determined, with the assistance of Earl Stanhope, to do every thing that was possible, in order to bring this art to perfection, and to establish it in this country. On this occasion, it is said, that the Earl availed himself of the instructions of Mr. Tilloch and Mr. Foulis. After two year's application, Mr. Wilson announced to the public, that the happiest success had crowned their exertions, and that the art of printing was now brought to a pitch of the most unexampled perfection. Every thing, he says, is so admirably contrived, that the most beautiful simplicity is com-

bined with the most desirable economy, and he looks forward to the happy period, when an application of this valuable art to the manufacture of books, will be the means of reducing the prices of all standard books at least thirty, and in many cases fifty per cent.

In January, 1804, Mr. Wilson proposed the adoption of this valuable improvement to the university of Cambridge, for printing bibles, testaments, and prayer-books, on terms, which with the approbation of Earl Stanhope, who declined accepting any remuneration for his valuable services, were highly advantageous to Mr. Wilson. An engagement was made—but some differences afterwards arising the contract was dissolved.

There is a book lately published in England, on stereotype printing, from which the curious reader may derive information. It is entitled, "An Account of the method of casting Stereotype, as practised by Charles Brightley, of Bungary, Suffolk, with a stereotype, metal plate." Not having yet seen this work, I can only give the following general account. When a work is to be stereotyped, the pages are set up in the ordinary way, with moveable types, and when they are made as correct as possible, a cast is taken from each, to serve as a mould for the stereotype plate. Into this, of course, the metal is poured, and thus is formed the solid stereotype plate, which is to be used at the press.

Mr. Wilson alleges, that a very great saving of cost is produced by this newly invented mode. He gives a computation, showing the expenditure by both methods of printing, on composition, reading, wear of type, and charges of composition; and on paper, press-work, charges on press-work, and insurance; and concludes that there is nearly fifty per cent saved by the new method. Besides this, as every page of the most extensive work has a separate plate, all the pages must be equally new and beautiful, whereas in printing with moveable types, this cannot be the case, as it is necessary to distribute and recompose them, several times, in the course of a large work.

As to the security from error which is alleged as an advantage peculiar to the stereotype, it is altogether a mistake. The moveable types, which are set up for the printing of any book, may exhibit an impression as correct as the stereotype, provided equal care has been taken to correct the proof-sheets, in the one case as in the other. After Mr. Wilson disagreed with the university of Cambridge, he published, in stereotype, a pamphlet entitled, "Arbitration between the University of Cambridge, and Andrew Wilson." And though it is to be supposed that every possible care was taken to render this work correct, it yet contains several errata. The work consists of only forty-four pages, and yet several inaccuracies may be observed; as in the forty-first page, *viod* for *void*, &c. Indeed it is evident, on the slightest consideration, that it is not possible that first editions of works should be more correct when stereotyped, than when printed in the common way; and then it is besides worthy of remark, that errors in stereotype must be perpetuated through all subsequent editions.

"In short," says a respectable writer, "we think that the stereotype art has much the advantage of common printing, in standard books, of very extensive circulation, and constant demand, and wherein no alteration, as to plan or size, is ever allowed to take place; but for the common and most general purposes of the art of printing, the method by moveable types is incomparably the best."

I have heard an ingenious printer say, that the stereotype printers had no advantage over him, when he was able to keep his types standing. But then it is to be considered, how disadvantageous it is, to have so many types as are required for a book of any considerable size, occupied in a work, of which an edition is wanted, perhaps only every second year. This would be much more expensive than the purchase of stereotype plates for any work, supposing that they should ever come to be manufactured for general use. This would be an extension of the art, highly to be desired. For, the moulds for the plates being once formed, the casting of these plates, on the supposition of a considerable demand, must be a matter of very moderate trouble and expense.

The books that have been printed in stereotype are very beautiful, and equally correct as the best editions of books printed in the ordinary mode. But as it would seem that there is no great saving of expense by the new method, it has as yet been only very partially adopted.

For the Belfast Monthly Magazine.

A DIALOGUE BETWEEN A DOCTOR, HIS PATIENT, AND A WHISKEY DISTILLER.

Doctor.

GOOD morning, Mr. A. how do you do this morning?

Patient. Indeed, dear Doctor, I feel but very indifferent, my stomach much out of order, my hand trembles, and my appetite is quite gone.

Dr. (Feels his pulse, puts his hand on his breast, &c.) Truly, dear Sir, your whole frame seems much out of tone, but I'll prescribe some medicines that will, I trust, be of great use. Ha! what is this on the side-board, that seems so fine and transparent?

P. Indeed Doctor that is an old acquaintance that you have often charged me to have less intimacy with; but I was so sickly, feeble, and thirsty this morning, that I could not refrain from taking a glass of my old friend, diluted with spring-water, otherwise, I am sure I would not have existed until now.

Dr. Ha, ha! (shaking his head, and putting on a very important look) so, so, good day, sir, good bye, farewell. Galen and Hypocrates, and all the ancient and all the modern physicians, doctors, quacks and apothecaries that ever existed, or at present do exist, are not able to save you from the grave, if you, contrary to my express directions, and injunctions, continue to hold up and maintain an intercourse and intimacy with your insidious and most potent and invincible enemy.

P. Stay, dear Doctor, stay a few minutes, I shall in future be guided entirely by your advice and directions. Ah, an! I am very weak and feeble, feeble; (here a qualm seizes the patient and he almost faints.)

Distiller. Mr. Doctor, I have hitherto listened with much patience to your invectives against whiskey, which it ill becomes a gentleman of your talents and liberality of sentiments to utter, especially as the abuse of it is conducive to your emolument, but of this more may be said again.

It is as innocent of the crimes you lay to its charge, as a new-born infant. It was made and created for the use and health of man, in this damp and foggy, and rainy northern region; you know that the best and most nutritive solids or liquids taken to excess are frequently productive of gouts, fevers, rheumatisms, and a long catalogue of disorders that end in death.

Dr. Hold, hold, Mr. Distiller, who taught you the study of physic, and to enumerate the disorders incident to the human body?

Dist. With your good leave, dear, Doctor, you will permit me to proceed in the vindication of my liquor. I said that the excessive use of those good things brought on various disorders, that terminated in death. As to myself, do I ever force any person to use my liquor at all, hot or cold? are not all its votaries endued with common sense and free will; have they not power to partake of such a quantity of its exhilerating body as may be useful, without going further? You may prescribe to your patients bolusus, and crocuses metallorum, &c. in a certain quantity, but if by the ignorance of yourself, or boy, a double dose is administered, your patient is a dead man; he had no means of avoiding the blow. Not so with my friends, if they will be guilty of self murder with their eyes open; let them be denied christian burial, let the priest only say, "dust to dust, ashes to ashes, earth to earth," and omit "in sure and certain hopes of a resurrection into life eternal."

P. Hold your peace Mr. Distiller, I have listened with too much patience to your harangue, in vindication of your liquor; no doubt some part of it is true, and some too shocking for a man in my situation to hear; do you deny your unfortunate victim, after in the guise of friendship, you have reduced him to a state of idiocity, and all the powers and faculties of his mind and body, into a state of inanity and disorder. Hand me that decanter, Doctor—(whirls it into the grate.) There, monster, I bid you an eternal adieu (whiskey takes fire, makes a great ex-